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520.46162X00

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: SATO et al

Serial No.: (not yet assigned)

Filed: May 3, 2006

For: Biological Photometric Equipment

Art Unit:

Examiner:

**TRANSLATION OF AMENDMENT OF THE CLAIMS**  
**UNDER ARTICLES 19(1) (Rule 46)**

Mail Stop: New Appln.  
Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

May 3, 2006

Sir:

Attached hereto is a Translation of the amendment of the claims under Article 19(1) (Rule 46) which was submitted in PCT/JP2004/009678 together with a translation of the cover letter submission and Brief Statement, as submitted.

The page numbers of the translated amendment have been revised to correspond to the numbered pages of the claims of the translation of the application as submitted herewith.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli,

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Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 520.46162X00) and  
please credit any excess fees to such deposit account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP



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[illegible]

The International Bureau of WIPO  
34 Chemin des Colombettes  
1211 Geneva 20,  
Switzerland

Re: International Application No. PCT/JP2004/009678  
Applicant: Hitachi, Ltd  
Agent: Katsuo Ogawa  
International Filing Date: 01.07.2004

The applicant, who received the International Search report relating to the above identified International Application transmitted on 19.10.2004, hereby files amendment under Article 19(1) as in attached sheets.

The applicant also files as attached herewith a brief statement explaining the amendment and indicating any impact that amendment therein might have on the description and drawings.

Katsuo Ogawa  
Katsuo Ogawa

(1) Amendment under Article 19(1)  
(2) Brief statement

4 sheets  
1 sheet

WHAT IS CLAIMED IS:

1. canceled
2. canceled
3. canceled
4. canceled
5. canceled
6. canceled
7. Biological photometric equipment comprising:

a light irradiating unit for irradiating a trial subject with mixed light obtained by mixing light in a first wavelength range having a peak wavelength at a first wavelength and light in a second wavelength range having a peak wavelength at a wavelength longer than the first wavelength; and

a light receiving unit, disposed on said trial subject, for detecting transmitted light irradiated from said light irradiating unit and propagating into the inside of said trial subject;

wherein a value of said first wavelength is in the range from 650 nm to 800 nm and a value of said second wavelength is in the range from 810 nm to 900 nm;

biological information concerning density of a light-absorbing material or changes in the densities in said trial subject is measured based on transmitted signals detected by said light receiving unit;

a sum of intensity of the irradiated light in said first wavelength range at a region X on the trial subject irradiated with the light and intensity of the irradiated light in said second wavelength range is kept not higher than a prespecified value; and

said equipment further comprises a unit for changing a ratio of irradiated light intensities so that intensity of irradiated light in said first wavelength range at said region X is at least either in the range from 0.3 to 0.7 time or in the range from 1.3 to 19 times as compared to that of irradiated light in said second wavelength range..

8. The biological photometric equipment according to claim 1, wherein said equipment further comprises a unit for changing a ratio of irradiated light intensities so that intensity of irradiated light in said first wavelength range at said region X is at least either in the range from 0.3 to 0.7 time or in the range from 1.3 to 10 times as compared to that of irradiated light in said second wavelength range when a value of said first wavelength is in the range from 700 nm to 790 nm.

9. The biological photometric equipment according to claim 1 further comprising:

a unit for calculating a measurement error included in information obtained from a measured living body;

a unit for calculating a ratio of irradiated light

intensities required for setting a measurement error included in information obtained from the measured living body; and

a unit for adjusting the irradiated light intensities based on a result of said calculation.

10. The biological photometric equipment according to claim 1 further comprising:

a unit for switching the ratio of irradiated light intensities from time to time between a and b, wherein sign a denotes a ratio of irradiated light in the first wavelength range against irradiated light in the second wavelength range at said region X substantially minimizing a measurement error included in information obtained from a first measured living body, and sign b denotes a ratio of irradiated light in the first wavelength range against irradiated light in the second wavelength range at said region X substantially minimizing a measurement error included in information obtained from a second measured living body.

11. The biological photometric equipment according to claim 4, wherein information obtained from said first living body relates to density or changes in density of oxygenated hemoglobin, and information obtained from said second living body relates to density or changes in density of deoxygenated hemoglobin.

6. The biological photometric equipment according to claim 1 further comprising an anchoring tool holding a plurality of said light irradiating units and said light receiving units and set on a head portion of a trial subject, wherein said anchoring tool has a plurality of holes provided thereon for setting therein optical fibers for a plurality of light irradiating units and a plurality of light receiving units alternately provided in lattice form.

A brief description under Articles 19(1)

Claims 1 and 2 are estimated that they lack novelty in the opinion of the international search organization. Claims 1, 2 and 6 are estimated that they lack inventive step in the opinion of the international search organization. Therefore claims 1, 2 and 6 are canceled.

Further, since claims 3, 4 and 5 are substantially same with claims 10, 11 and 12, claims 3, 4 and 5 are canceled.

The technical matter "a unit for changing a ratio of irradiated light intensities" in claims 7 to 12 fully shows the characterizing feature of the biological photometric equipment of the present invention.

Further, the technical matter "as a measuring point at a roughly central point between a light irradiating unit and a light receiving unit" in claim 7 is deleted because it is not essential matter of the present invention.

Citations disclose only elementally technical matter defined each of amended claims of the biological photometric equipment of the present invention.